

CLAIMS

1. Water-resistant portable apparatus (1) including a case (2) in which there is mounted an electroacoustic transducer (21) separated from an inlet cavity (11) in a water-resistant manner by a deformable membrane (15), said inlet cavity being arranged in said case and in direct communication with the exterior, characterized in
5 that said electroacoustic transducer and said inlet cavity are arranged collaterally such that at least one part of said transducer, respectively said cavity, of a determined thickness is arranged in the same slice (28) of said case and in that an acoustic channel (24) connects said transducer to said deformable membrane to transmit acoustic vibrations.
- 10 2. Portable apparatus according to claim 1, characterized in that said electroacoustic transducer is a dynamic electroacoustic transducer.
3. Portable apparatus according to claim 1 or 2, characterized in that said electroacoustic transducer includes a loudspeaker.
4. Portable apparatus according to claim 3, characterized in that said
15 loudspeaker includes a flexible membrane (22) arranged facing said acoustic channel.
5. Portable apparatus according to claim 3 or 4, characterized in that said electroacoustic transducer also includes a vibrator.
6. Portable apparatus according to claim 5, characterized in that said electroacoustic transducer also includes a vibrating element arranged toward the
20 inside of the case.
7. Portable apparatus according to any of the preceding claims, characterized in that said acoustic channel (24) is arranged in the back cover (10) of the case which is separated from the inlet cavity in a water-resistant manner by said deformable membrane.
- 25 8. Portable apparatus according to claim 7, characterized in that the back cover of the case forms a support surface for said deformable membrane when external pressure greater than a predetermined value is applied thereto.
9. Portable apparatus according to claim 7 or 8, characterized in that at least one electrical or electronic component (32, 33) is arranged in the back cover of
30 the case.
10. Portable apparatus according to claim 9, characterized in that said electrical component is an accumulator (32).
11. Portable apparatus according to any of claims 7 to 10, characterized in that the back cover of the case is removable, and in that a protective member (19),
35 fixedly mounted in the case, is capable on the one hand of supporting said deformable

member when external pressure greater than a predetermined value is applied thereto and on the other hand, of protecting said deformable membrane when the back cover of the case is removed.

12. Portable apparatus according to claim 11, characterized in that said
5 protective member (19) extends along the acoustic channel so as to also protect the flexible member (22) of said electroacoustic transducer.

13. Portable apparatus according to any of the preceding claims,
characterized in that the deformable membrane is a water-resistant and gas-proof
membrane and in that the apparatus further includes pressure-balancing means (29,
10 30, 31) for balancing the slow differential pressure variations on either side of said deformable membrane.

14. Portable apparatus according to any of the preceding claims,
characterized in that said portable apparatus is a telephone watch.

15. Telephone watch according to claim 14, characterized in that it includes
at least one control member (35a, 35b, 36) on the external periphery of the case and
in that said inlet cavity is in communication with the exterior through at least one inlet
channel (12) arranged in proximity to said control member.

16. Telephone watch according to claim 15, characterized in that it includes
two inlet channels (12a, 12b) oriented along different directions.

20 17. Water-resistant portable apparatus (1) including a case (2) in which there
is mounted an electroacoustic transducer (21) separated from at least one inlet cavity
(11) in a water-resistant manner by a deformable membrane (15), said inlet cavity
being arranged in said case and in direct communication with the exterior,
characterized in that the back cover (10) of the case, which includes at least one
25 electrical or electronic component (32, 33) is separated from the inlet cavity in a water-
resistant manner by said deformable membrane.